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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,897	05/14/2001	Andrew D. Hamilton	44574-5100	6169

2292 7590 09/04/2003

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EXAMINER

WESSENDORF, TERESA D

ART UNIT PAPER NUMBER

1639

DATE MAILED: 09/04/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,897

Applicant(s)

HAMILTON ET AL.

Examiner

T. D. Wessendorf

Art Unit

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27,28 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27,28 and 30-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1639

DETAILED ACTION

Status of Claims

Claims 1-26 have been cancelled in the 1/31/03 amendment.

Claim 29 has been cancelled in the amendment of 6/13/03.

Claims 27-28 and 30-32 are pending and under examination.

Specification

In view of the amendments to the disclosure, the objection to the disclosure no longer applies.

Claim Rejections - 35 USC § 112, first paragraph

The following is a quotation of the first paragraph of 35

U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

New claims 27-28 and 30-32 are rejected under 35

U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Art Unit: 1639

The method steps of claim 27 reciting the "providing" step is not supported in the as-filed specification. Applicants point out that support can be found at page 9, paragraph [0024] and page 13 paragraph [0041]. A review of the cited section recites for a "producing" step. Producing is not the same as providing.

In view of the amendments to the claims, the rejection of claims 29 and 30 as lacking support and adequate written description has been obviated and is moot with the cancellation of claim 29.

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-28 and 30-32 are rejected under 35 U.S.C. 112, second paragraph as applied to the newly amended claims for reasons set forth in the last Office action.

A. The rejection of claim 27 in the last Office action is withdrawn in view of the amendments to the claim.

B. Applicants argue that claim 28 requires that these fusion proteins be encoded by a nucleic acid that is transfected or transformed into a host cell and expressed. It is further argued that claim 28 is narrower in scope than claim 27.

Art Unit: 1639

In response, as disclosed in the specification these are two different embodiments of the invention. Claim 28 is not narrower in scope. Claim 28 recites steps involving nucleotides. Claim 27 is drawn to detecting interaction at the protein level.

C. The rejection with respect to claim 29 is moot with the cancellation of claim 29. The rejection of claim 30 is withdrawn in view of the amendment to the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27-28, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer (US 2002/0037999) in view of either Anderson et al (6,180,343) or Katz et al (Biotechniques) for reasons of record.

Response to Arguments

In view of applicants' arguments that Michnick was published after the instant priority date, the Michnick reference no longer applies.

Art Unit: 1639

Applicants argue that none of the references cited by the examiner suggest using a split detectable marker to identify protein interactions between a known protein and a test protein. It is also argued that none of the references disclose a full length GFP split at a surface loop. Anderson is argued to distinguish from the instant invention in that Anderson wants to avoid local distortion in the GFP structure since this is feared to destabilize folding intermediates or allow access to GFP's buried tripeptide fluorophore and subsequently decrease or even eliminate GFP's fluorescence. The present invention is argued to have realized that a total dissection of two halves of GFP independently is capable of forming functional GFP when brought close together by proteins with affinity for each other.

In response, there appears to be no distinction between Anderson and the present invention. Anderson discloses, like the instant invention, dissection of a full length GFP at the loop positions 154-159 which includes the instant dissected region of 157 and 158. Anderson, in fact, knew that the factors that can cause elimination of GFP fluorescence and gave such guidelines. Like, the instant invention the two proteins fused in each of the GFP fragments result in a functional GFP emitting said fluorescence. Accordingly, in the absence of new and unexpected

Art Unit: 1639

results the claimed invention is prima facie obvious over the combined teachings of the art.

[Inserting in the claim leucine zipper to form a fusion with the GFP variant will render the claim allowable].

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

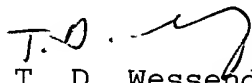
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1639

Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. D. Wessendorf whose telephone number is (703) 308-3967. The examiner can normally be reached on Flexitime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (703) 306-3217. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7924 for regular communications and (703) 308-7924 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.


T. D. Wessendorf
Primary Examiner
Art Unit 1639

tdw
September 3, 2003